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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,946	03/15/2004	Shuang-yong Xu	NEB-183-CIP	2242
28986	7590	12/07/2006	EXAMINER	
HARRIET M. STRIMPEL; NEW ENGLAND BIOLABS, INC. 240 COUNTY ROAD IPSWICH, MA 01938-2723			PATTERSON, CHARLES L JR	
			ART UNIT	PAPER NUMBER
			1652	

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,946

Applicant(s)

XU ET AL.

Examiner

Charles L. Patterson, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-13, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 6-10 is/are allowed.
- 6) ☒ Claim(s) 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 13, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Newly added figures 9, 10-1, 10.2, 10-3 and 10-4 are objected to because they do not have "new sheet" at the top margin, as required by 37 CFR § 1.121(d). Also the instant figures are objected to as they are obviously informal figures and formal figures are required.

Newly added Figure 9 is apparently the same as Figure 1C of Malone, et al. (AX) and therefore is not new matter since the sequence was referred to previously in the specification. Applicants have stated that Appendix 1 is the sequence for BsgI but they have not requested that Appendix 1 be added to the instant specification. If applicants desire that Appendix 1 be added to the specification, they should specifically state this. Applicants should specifically state that the sequences shown in Figures 10-1 - 10-4 are the same as previously published sequences, as GenBank sequences can be changed at any time without notice to the public. If applicants wish to use the GenBank sequences, they should preferably enclose a copy of the GenBank sequence that is dated prior to the instant effective filing date along with the statement.

The amendment filed 11/20/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The changes to page 34, i.e. adding "X" in line 6 and changing "X" to "VIII" in line 7 of the amendment, are apparently not supported by the original specification and applicants offer no reason they were changed. On page 15 of applicants' Remarks it is simply stated that "[t]he Examiner is thanked for pointing out the typographical errors on page 34, lines 23 and 25. For

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purposes of consistency with Malone et al (AX), applicants have amended the text accordingly". No explanation as to why the recitations were different in the Malone reference and the original specification is given.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is confusing and indefinite in the recitation of "optionally" on line 10. This rejection is repeated for the reasons in the last action. Applicants have moved the word "optionally" in the amended claim but have made no comment regarding the confusing and indefinite nature of the word.

Claim 12 is confusing in the recitation of "corresponding to within a..." Apparently "within" should be deleted.

After a careful re-reading of the instant specification in view of the instant amendment and remarks, it is concluded that the GNPPY sequence referred to in the last action is present in the methylase domains of the RM proteins of *BpmI* and *AcuI*, not in the methylase protein. This would be SEQ ID NO:4 in the case of *BpmI*, not SEQ ID NO:2. Also, "FDAIIGNPPY" in *BpmI* and "FDVILPNPPY" in *BsgI* are located in the methylase domains and not in the methylase protein. Apparently, the functional *BpmI*, *AcuI*, *BsgI* and *ThaIV* endonuclease proteins have a cleavage domain, a methylase domain and a specificity domain that is separate and distinct from the methylase protein and apparently this cleavage domain, methylase domain and specificity domain are all necessary for restriction specific cleavage to occur.

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Accordingly, the previous 35 USC § 112 first paragraph rejection is dropped.

Claims 1-3 and 6-10 are allowed. Claim 13, 15 and 16 are objected to as being dependent upon a rejected base claim.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Patterson, Jr., PhD, whose telephone number is 571-272-0936. The examiner can normally be reached on Monday - Friday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles L. Patterson, Jr.
Primary Examiner
Art Unit 1652

Patterson
December 4, 2006